COMPETENCY-DRIVEN BENEFITS REALIZATION MODEL FOR MINIMIZATION OF POST-CONTRACT TRANSACTION COSTS IN DESIGN-BUILD (D&B) DELIVERY SYSTEMS

ABDULAZEEZ UMAR RAJI

A thesis submitted in
fulfillment of the requirement for the award of the
Degree of Doctor of Philosophy in Real-Estate and Facilities Management

Faculty of Technology Management and Business
Universiti Tun Hussein Onn Malaysia

APRIL, 2017.

To my beloved father and mother

ACKNOWLEDGEMENT

In the name of Allah, the Most Gracious and the Most Merciful Alhamdulillah, all praises to Allah for the strengths and his blessing in completing this thesis. My sincere gratitude goes to my supervisor, Assoc. Prof. Dr. Christy P. Gomez for his motivation, enthusiasm, immense knowledge and valuable supervision. And also my deepest gratitude goes to my co-supervisor Dr. Mohd Yamani Bin Yahaya. I would like to express my deepest gratitude to my beloved wife Halima Abubakar Jibril and daughter Nafisa for their spiritual support and prayers throughout the period of my studies.

I would also like to thank the management of Universiti Tun Hussein Onn Malaysia for offering me the Graduate Research Project Grant Incentive Scheme (Vote No. U196) for the duration of this program. Furthermore, I would also like to thank the entire academic and non-academic staff of the Faculty of Technology Management and Business and also the Centre for Graduate Studies for their support.

Most importantly, I would like to express my immense gratitude to my parents, Alh. Umar Raji and Mal. Hauwa Umar Raji for all the love, moral support and prayers. I would also like to express my heartfelt gratitude to my brothers and sisters, for all their constant support and prayers, also to my brother, Alh. Muazu Hassanu Raji for his financial support and prayers and lastly to all my uncles.

My special appreciations to my friends who were jointly pursuing their postgraduate studies in Malaysia, Dr. Yakubu Aminu Dodo and his wife Faiza, Moh'd Kabir Kaigama, Nuhu Isah, Abdulnasir Isah, Anwar Wurochekke, Dr. Yusoof Birkididi, Dr. Moh'd Mustapha Gambo, Ashwin Narendra Raut, Dr. Isa Kotirde, Mahmoud Hijab, Zubainatu Abba, Musa Alkali, Disina Abdulkadir, Zannah Ali and all those whose names have not been stated here, thank you. And, also to my friends in Nigeria; Mansur and his wife Ummi Mai, Abubakar Abdullai Idi and many others, thank you.

ABSTRACT

The construction industry has been struggling with the issue of inconsistent performance with respect to cost of projects, completion time and the delivery of a quality product. In an attempt to address this issue the Design-Build (D&B) project delivery system was initiated primarily to overcome the shortcomings of the traditional procurement strategies. Although, traditionally D&B delivery system was aimed to greatly enhance client's benefits, this has not significantly been achieved. It lacks clear benefits realization management process to deliver the planned client's benefits. In particular, the Transaction Costs (TCs) incurred at the post-contract phase (PTCs) through D&B system has been the subject of criticism, wherein it has been unable to achieve the expected resounding success of a total shift away from the issues attributed to the traditional systems. This research aims to establish the importance of leveraging on D&B project team-competency and commitment structured within a strategic Benefits Realization Management framework to optimize client's benefits in terms of minimizing PTCs. The focus is on the aspect of competencies of key project participants and their project team commitment with respect to minimizing TCs that is structured within a Benefits Realization Management (BRM) practice. Questionnaire survey data was obtained from 231 respondents out of 357 administered questionnaires to G7 contractors registered under CIDB Malaysia that was based on a systematic sampling of the existing CIDB contractor database. The partial least squares structural equation modeling (PLS-SEM) technique was used to test the relationships being hypothesized and to validate and confirm the developed Competency Driven Benefits Realization Model (CD-BREM). Exploratory preliminary research findings reveal that post-contract TCs for D&B projects range from 3.5% to 13.5% of the project value. The primary research findings reveal that D&B team commitment has partial mediating effect between team competency and post-contract TCs. Whilst, BRM was found to have a partial mediating effect between team competency and post-contract TCs and no moderating effect as initially hypothesized. In general the research findings indicate that team competency, commitment and BRM have significant positive influences on post-contract TCs. This research provides a multi-dimensional perspective of the D&B project benefits realization concept and has the potential to address the issue of minimizing PTCs, which is seen as a social waste of wealth. Using CD-BREM it is possible to identify key human factors that can contribute to high project performance that also serves as an enabling mechanism for realizing the full potential of the D&B method for delivering successful projects. This research is timely to help reverse the trend of poor performance within the construction industry as a whole. Further work on the implementation of this CD-BREM model on construction projects and the consideration of including additional independent variables in the research theoretical framework can be explored to strengthen the credibility of the outcome of this research which is aimed at minimizing PTCs.

ABSTRAK

Industri pembinaan telah bergelut dengan isu prestasi yang tidak konsisten berkenaan dengan kos projek, masa siap dan penghasilan produk yang berkualiti. Dalam usaha untuk menangani isu ini sistem perolehan Design-Build (D&B) projek telah dimulakan terutamanya untuk mengatasi kelemahan strategi perolehan tradisional. Walaupun, secara tradisinya sistem perolehan D&B bertujuan untuk meningkatkan manfaat pelanggan, ini tidak dicapai dengan begitu ketara. Sistem perolehan D&B tidak mempunyai proses *pengurusan kesedaran manfaat* yang jelas untuk memastikan faedah optimum bagi pelanggan. Khususnya, Kos Transaksi pada fasa pasca-kontrak (PTCs) melalui sistem D&B telah menjadi subjek kritikan, ia tidak dapat mencapai kejayaan yang dibangga-banggakan berbanding dengan sistem tradisional. Kajian ini bertujuan untuk mewujudkan kepentingan kompetensi dan komitmen pasukan projek D&B di dalam rangka kerja Pengurusan Faedah Kesedaran strategik untuk mengoptimumkan manfaat pelanggan dengan mengurangkan PTCs. Tumpuan adalah kepada aspek kecekapan peserta utama projek dan komitmen pasukan projek bagi tujuan meminimumkan TCs yang berstruktur dalam Pengurusan Faedah Kesedaran (BRM). Data soal kaji selidik diperolehi daripada 231 responden daripada 357 soal selidik yang diedarkan kepada kontraktor G7 yang berdaftar di bawah CIDB Malaysia, berdasarkan persampelan sistematik pangkalan data kontraktor CIDB yang sedia ada. Teknik PLS-SEM telah digunakan untuk menguji hubungan yang hipotesis dan untuk mengesahkan dan mengesahkan dibangunkan Kompetensi Faedah Didorong Merealisasikan Model (CD-BREM). Dapatan penyelidikan awal secara penerokaan mendedahkan bahawa PTCs untuk D&B projek terdiri antara julat 3.5% hingga 13.5% nilai projek. Dapatan kajian utama mendedahkan bahawa komitmen pasukan D&B mempunyai kesan perantara separa antara kecekapan pasukan dan PTCs. Sementara itu, BRM didapati mempunyai kesan perantara separa antara kecekapan pasukan dan PTCs dan tiada kesan kesederhanaan seperti dijangkakan pada hipotesis awalan. Secara umum dapatan kajian menunjukkan bahawa kecekapan dan komitmen pasukan serta BRM mempunyai pengaruh positif yang signifikan terhadap PTCs. Kajian ini memberi perspektif pelbagai dimensi bagi konsep kesederaan manfaat D&B projek dan mempunyai potensi untuk menangani isu meminimumkan PTCs, yang dilihat sebagai satu pembaziran kekayaan sosial. Faktor-faktor manusia utama yang boleh menyumbang kepada prestasi projek yang tinggi serta berfungsi sebagai mekanisme yang membolehkan untuk merealisasikan potensi kaedah D&B untuk menghasilkan projek yang berjaya dapat di capai dengan menggunakan CD-BREM. Kajian ini adalah tepat pada masanya untuk membantu meningkatkan prestasi dalam industri pembinaan secara keseluruhan.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF SYMBOLS AND ABBREVIATION

TCs	Transaction Costs
PTCs	Post-Contract Transaction Costs
BR	Benefits Realization
BRM	Benefits Realization Management
CD-BREM	Competency-Driven Benefits Realization Model
PLS	Partial Least Square
D&B	Design & Build
SEM	Structural Equation Modeling
TCE	Transaction Costs Economics
TCT	Transaction Costs Theory

LIST OF APPENDICES

CHAPTER 1

INTRODUCTION

1.1 Overview

The construction industry has been struggling with the issue of inconsistent performance with respect to cost of projects, completion time and the delivery of a quality product. These challenges have been addressed by researchers with some success, however in contrast to other industries the construction industry is still seen to be lagging. One strategy that has evolved amongst construction practitioners and researchers is the adoption and adaptation of ideas and techniques developed within other industries. The major ones being the Manufacturing and the Information and Communication Technology fields.

The concept of Best Value, Value Maximization and Benefits Realization are a few notable concepts adapted from these fellow industries, but as yet to be realized as having a significant impact. This chapter provides an introduction to the main subject of Benefits Realization in the process of procurement of building projects, to start with. The research problem related to low achievement of client satisfaction on construction projects is identified. Within this context of client satisfaction, based on comprehensive literature review, it is clear that mainstream research on construction project performance has neglected the aspect of skills and competencies of key project

participants towards minimizing Transaction Costs (TCs) - a clear gap within the research literature. Viewed from the perspective of client satisfaction (which is represented in this thesis within the context of benefits maximization), the traditional procurement strategies, with respect to this measure for project success, that is achieved through the conventional *requirements capture* process (the precursor to benefits maximization) is presented.

A critical review of the current D&B approach is presented based on the understanding that the Design-Build (D&B) project delivery system was developed primarily as an attempt to overcome the shortcomings of the traditional procurement strategies, in relation to client satisfaction. The proposed research aim of a context-specific D&B contractors' team-competency approach is argued for (and tested) as a driver in order to Maximize Benefits with respect to satisfying clients' needs for D&B projects. In this research, the D&B project environment is viewed as currently being able to provide the most conducive platform for achieving benefits maximization. However, it is evident from previous research that it is failing to achieve the highly acclaimed advantages in comparison to traditional procurement. An outline research methodology is presented along with the roadmap towards achieving the research aim of establishing a contractors' team-competency action framework for benefits maximization in D&B projects. The structure of the thesis is represented in progressive phases based on the research flow, highlighting the actions to be taken to develop, evaluate and conclude the research findings that can contribute to higher efficiency for maximizing benefits. Thus, driving benefits realization by leveraging on team performance, enabled by team commitment that emphasizes on competency development for performative action through Knowledge-In-Action.

1.2 Background of the study

Generally, projects are driven by a need to satisfy a set of benefits for different groups of stakeholders (Winter *et al.*, 2006). As such project initiatives can only be regarded as successful if the intended benefits are realized (McCartney, 2000). Although it is

premised that projects are often to be delivered on time, cost and quality, but yet the expected benefits are not always realized. Recently, benefits realization (and management) has received greater attention in terms of being the "new" practice for private and public sector projects in a number of sectors, including housing development, education facilities and healthcare infrastructure.

Although the word 'benefit' is used widely in everyday life, it is very poorly defined. Benefit can simply be understood as a '*measurable improvement*' (Sapountzis, 2013). Bradley (2010) defines benefit as an outcome of change which is perceived as positive by a stakeholder; and along similar lines of thinking, Ward & Daniel (2006) define it as 'an advantage on behalf of a particular stakeholder or group of stakeholders'. The important point in the definitions is that benefits are owned by individuals or groups who want to obtain *value* from an investment (Glynne, 2007).

Within the above definitions of 'benefit', it is necessary to understand the term benefits realization. Benefits realization could be defined as experiencing the positive impact as a result of a change [or action]. However, by introducing the term 'management' in benefits realization, Bradley (2010) defines it as the *process of organizing and managing*, so that potential benefits arising from investment in change [or action] are actually achieved. Whilst, Turner (2014) defines benefits management as the process for the optimization of benefits from organization change programmes.

From the construction industry perspective, the ideal has always been to seek out procurement strategies and project delivery mechanisms that can achieve and even supersede the planned client's needs and benefits. It is within this context that the Design-Build (D&B) approach is seen to have been initiated within the construction industry. The construction industry needs to innovate in order to keep pace with the changes that the world is constantly facing. In addition to responding to the pressing social, economic and technological challenges affecting all industries today, it cannot be denied that the opportunities and problems facing construction in the future will be very different from those of today. It is without doubt that the needs of society and demands of clients will not remain stagnant - requiring greater competency acquisition, commitment and better benefits realization management (BRM) strategies that will transform the way the built environment is designed, built and maintained to generate

better value. Thus, there is a constant need to seek out new techniques and tools to be able to deliver construction projects within the context of developing a sustainable built environment. This is evident in the growing concern and commitment to be more ecologically productive. It is in this sense that the concept of value is seen to be aligned, with the aim of achieving project success from a sustainability perspective. Additionally, the overarching concept of BRM is seen as being able to address issues within the broad spectrum of sustainable development, focusing on adding value and minimizing waste.

The D&B procurement method is one of the systems advocated by mainstream construction industry practitioners and researchers in order to overcome inadequacies of the traditional procurement method. The basic concept of the D&B approach is the client having the project contracted to a single organization (one stop shop total solution) that would be responsible for design, procurement and engineering as well as commissioning, allowing for integrated project delivery. D&B, as it was intended, appears to be a panacea to many of the problems faced by the clients and other key stakeholders in the construction industry. This delivery system has been used around the globe extensively and its popularity has grown substantially over the years (Emsen & Schexnayder, 2000). It is noted by Chan (2000) and Lam *et al.* (2003) that D&B has been used extensively to help deal with the problems associated with the traditional system. They however point out that the implementation of D&B is not without its problems, wherein clients and other stakeholders have increasingly shown concerns regarding the benefits of the D&B method in actual practice.

In Malaysia, not all the D&B projects were successfully delivered as designed and planned. The D&B concept has been labeled to be ‘designed to fail’ by the then Malaysian Second Finance Minister as reported by the New Sunday Times, February 4, 2007. This is due to the fact that, some of the D&B mega projects have failed to effectively deliver benefits as to client’s requirements (Jasri, 2011). It is noted by Gambo & Gomez (2015); Abdul Rahman *et al.* (2006); Seng & Yusof (2006); Isa *et al.* (2011); and Hashim *et al.* (2006) that clients’ expectations in the D&B delivery system are not adequately met and the system is not being practiced in the manner that is meant to leverage on its potential benefits in the Malaysian construction industry. It is

identified in the literature that a constraint such as lack of management expertise is also a contributor to D&B project failure.

Firstly, the significant problem that tends to impede the development of the D&B procurement approach is the nature of the management structure of the D&B companies in the Malaysian construction industry, wherein a fragmented approach still persists in the industry in spite of the supposedly one stop shop practice. The practice of the D&B delivery system in the Malaysian construction industry is characterized by the D&B organization outsourcing consultants (expertise) to execute their projects (Gambo & Gomez, 2015). This type of management structure is referred to here as the fragmented D&B; it is characterized by the nomination of external design consultants by the contractor to carry out the designs of the project (Masterman, 2002). These external consultants are coordinated by the in-house project managers who manage their activities in order to ensure, what seems to be the client's interest with regards to traditional client briefs and requirements capture. Such management structures are likely to result in various problems during project execution. This is due to the structure's inherent separated feature, which makes the system vulnerable to the problems that have long been associated with the traditional procurement approaches (Masterman, 2002).

It is clear that the development of the D&B concept, referred to as a mode of prime contracting, was well intended to improve coordination and communication in project delivery through a flatter organization structure with less fragmentation. However, this was not realized due to the *dominant product* and *activity-based organization principles* embedded within the industry. It is premised (hypothesized), in terms of situating this research, that the option of resorting to D&B as a total solution for project delivery seems not to have had a resounding success as the D&B benefits realization management strategies and core competencies are not embedded within the project delivery system to match the opportunities for benefits realization of the client's requirements. It is affirmed by Jaafar & Radzi (2012) that contractors in Malaysia are often nominated based on low-bid criteria, with little emphasis on their competencies, therein often leading to the production of a failed product that does not meet the client`s needs. These failed projects have influenced the perception of the society and the industry that D&B will generate more problems rather than provide greater benefits, as

REFERENCES

Abdul Rahman, H., Rahim, F.A.M., & Low, W. (2006). A study on the quality management during the pre-construction stage of design and build projects. In: *Quantity Surveying National Conference*. Kuala Lumpur.

Abdul Rahman, H.A., Wang, C. & Yap, X.W. (2010). How professional ethics impact construction quality: Perception and evidence in a fast developing economy, *Scientific Research and Essays, 5* (23), 3742-3749

Abdul Rashid, K. (2002). *Construction Procurement in Malaysia*. Kuala Lumpur: IIUM Press.

Abdul Rashid, R., Mat Taib, I., Ahmad, W., Basiron, W., Nasid, M., Wan Ali, W. N., & Mohd Zainordin, Z. (2006). Effect of procurement systems on the performance of construction projects. In: Padang, eprints.utm.my (Accessed: August 17, 2015).

Abdul Rashid, Z., Sambasivan, M., & Johari, J. (2003). The influence of corporate culture and organisational commitment on performance. *Journal of management development*, *22*(8), 708-728.

Abdul Razak, I. A., Roy, M. H., Ahmed, Z., & Imtiaz, G. (2010). An investigation of the status of the Malaysian construction industry. *Benchmarking: An International Journal*, *17*(2), 294-308.

Adnan, H., Jusoff, K., & Salim, M. K. (2008).The Malaysian construction industry's risk management in design and build. *Modern Applied Science, 2*(5), 27.

Ahadzie, D. K., Proverbs, D. G., Olomolaiye, P. O., & Ankrah, N. (2009). Towards developing competency- based measures for project managers in mass house building projects in developing countries. *Construction Management and Economics, 27*(1), 89-102.

Ahsan, K., Ho, M., & Khan, S. (2013). Recruiting project managers: A comparative analysis of competencies and recruitment signals from job advertisements. *Project Management Journal*, 44(5), 36-54.

Aibinu, A. A., Ling, F. Y. Y., & Ofori, G. (2011). Structural equation modeling of organizational justice and cooperative behavior in the construction project claims process: contractors' perspectives. *Construction Management and Economics, 29*(5), 463-481.

Akintoye, A. & Fitzgerald, E. (1995). Design and build: a survey of architect's views. *Engineering, Construction and Architectural Management*, *2*(1), 27-44.

Akintoye, A. (1994). Design and build: a survey of construction contractors' views. *Construction Management and Economics*, *12*(2), 155-163.

Akram, M., Malik, M. I., Sarwar, M., Anwer, M., & Ahmad, F. (2015). Relationship of teacher competence with professional commitment and job satisfaction at secondary level. *The AYER, 4*, 58-70.

Alexander, P. M. (2002). *Towards reconstructing meaning when text is communicated electronically*. (Unpublished Doctoral thesis, University of Pretoria). Retrieved from: *http://upetd.up.ac.za/thesis.*

Ali, S. A., Kamaruzzaman, S. N. & Salleh, H. (2009).The Characteristics of Refurbishment Projects in Malaysia. *Malaysia Facilities*, 27(2), 56-65.

Allen, N. J. & Meyer, J. P. (1990).The measurement and antecedents of affective, continuance and normative commitment to the organization. *Journal of Occupational Psychology*, 63, 1 – 18.

Allen, N. J., & Meyer, J. P. (1996). Affective, continuance, and normative commitment to the organization: An examination of construct validity. *Journal of vocational behavior*, *49*(3), 252-276.

Allutto, J. A., Hrebiniak, L. G. & Alonso, R. C. (1973).On operationalizing the concept of commitment. *Social Forces*, 51, 448 – 454.

Almutairi, D. O. (2016). The mediating effects of organizational commitment on the relationship between transformational leadership style and job performance. *International Journal of Business and Management*, *11*(1), 231.

Alsagoff, S., & McDermott, P. (1994). Relational Contracting: A Prognosis for the U.K. Construction Industry? In: *Rowlinson, S (ed.). Proceedings of the CIB W92 Conference*, University of Hong Kong

Antinori, C., & Sathaye, J. (2007). Assessing transaction costs of project-based greenhouse gas emissions trading. *Lawrence Berkeley National Laboratory, Berkeley, California.*

Arditi, D. & Gunaydin, H.M. (1997). Total quality management in the construction process. *International Journal of Project Management*, *15*(4), 235-43.

Arditi, D., & Chotibhongs, R. (2009). Detection and prevention of unbalanced bids. *Construction Management and Economics*, *27*(8), 721-732.

Arditi, D., & Pulket, T. (2009). Predicting the outcome of construction litigation using an integrated artificial intelligence model. *Journal of Computing in Civil Engineering*, *24*(1), 73-80.

Arnold, J. (2005). *Work Psychology: Understanding Human Behavior in the Workplace* (4th ed). London: Prentice Hall Financial Times.

Arnold, J., Silvester, J., Patterson, F., Robertson, I., Cooper, C., & Burnes, B. (2005). *Work Psychology: Understanding Human Behavior in the Workplace* (Fourth ed.). England: Prentice Hall.

Ashkezari, M. J. D., & Aeen, M. N. (2012).Using Competency Models to Improve HRM. *Ideal Type of Management*, *1*(1), 59-68.

Ashurst, C., & Doherty, N. F. (2003). Towards the formulation of a 'best practice' framework for benefits realization in IT projects. *Electronic Journal of Information Systems Evaluation*, *6*(2), 1-10.

Athey, T. R. & Orth, M. S. (1999). Emerging competency methods for the future, *Human Resource Management*, 38(3), 215 – 226.

Atkinson, R. (1999). Project management: cost, time and quality, two best guesses and a phenomenon, it's time to accept other success criteria. *International Journal of Project Management*, *17*(6), 337-342.

Atkinson, R., Crawford, L., & Ward, S. (2006). Fundamental uncertainties in projects and the scope of project management. *International Journal of Project Management*, *24*(8), 687-698.

Babbie, E. (2007). *The practice of social research* (7th ed.): Thomson Wadsworth.

Baca, C. & Starzmann, G. (2006).Clarifying competencies: powerful tools for driving business success, *Workspan*, 49(4), 52-55.

Bajari, P., & Tadelis, S. (2001). Incentives versus Transaction Costs: A Theory of Procurement Contracts. *The RAND Journal of Economics*, *32*(3), 387-407.

Ballard, G. (2008). The lean project delivery system: An update. *Lean Construction Journal*, *2008*, 1-19.

Barclay, D., Higgins, C., & Thompson, R. (1995). The partial least squares (PLS) approach to causal modeling: personal computer adoption and use as an illustration. *Technology studies*, *2*(2), 285-309.

Barthélemy, J., & Quélin, B. V. (2006). Complexity of Outsourcing Contracts and Ex Post Transaction Costs: An Empirical Investigation. *Journal of Management Studies*, *43*(8), 1775-1797.

Bartlett, J. (2006). *Managing programmes of business change*, Hampshire, UK.

Bataglia, W., da Silva, A. A., & Franceschi, C. F. (2011). Dimensões da imitação entre empresas: um estudo na indústria de transformação brasileira. *RAE-Revista de Administração de Empresas*, *51*(2), 160-174.

Beard, J., Loulakis, M. & Wundram, E. (2001). *Design-build: Planning through development*. 1st ed. New York: Mc Graw Hill.

Beck, K. & Wilson, C. (2000). Development of affective organizational commitment. A cross-sequential examination of change with tenure. *Journal of Vocational Behavior*, 56, 114 – 136.

Becker, H. S. (1960). Notes on the concept of commitment. *American Journal of Sociology*, 66, 32–40.

Becker, T. E., Billings, R. S., Eveleth, D. M., & Gilbert, N. L. (1996). Foci and bases of employee commitment: Implications for job performance. *The Academy of Management Journal*, *39*(2), 464-482.

Bender, K. A. (2014). *Cultural intelligence and its relationship with key project manager competencies* (Doctoral dissertation, Indiana Institute of Technology).

Benkhoff, B.R.D. (1997). Ignoring commitment is costly: New approaches establish the missing link between commitment and performance. *Human Relations, 50*(6), 701-726.

Benson, J., & Brown, M. (2007). Knowledge workers: What keeps them committed; what turns them away. *Work, Employment and Society, 21*(1), 121-140.

Best, P. W. (1994).*Locus of control, personal commitment and commitment to the organization*.(Master thesis. University of South Africa, Pretoria).

Biggam, J. (2015). *Succeeding with your master's dissertation: a step-by-step handbook*. McGraw-Hill Education 3rd Ed (UK).

Borghei, R., Jandaghi, G., Matin, H. Z., & Dastani, N. (2010). An examination of the relationship between empowerment and organizational commitment. *Academic Leadership, 8*(1).

Boyatzis R.E. (1982). *The competent manager*: a model for effective performance. John Wiley & Sons, Inc.

Boyatzis, R. E. (2008). Competencies in the 21st century. *Journal of Management Development, 27*(1), 5–12.

Bradley, G. (2006). *Benefit Realization Management – A Practical guide to achieving benefits through change*, Hampshire, UK, Gower.

Breese, R. (2012). Benefits realization management: Panacea or false dawn? International *Journal of Project Management, 30*(3), 341–351.

Bremer, W., & Kok, K. (2000). The Dutch construction industry: a combination of competition and corporatism. *Building Research & Information, 28*(2), 98-108.

Brett, J. F., Cron, W. L., & Slocum Jr, J. W. (1995). Economic dependency on work: A moderator of the relationship between organizational commitment and performance. *The Academy of Management Journal, 38*(1), 261-271.

Brian, M. (2007). *Organizational Commitment, Relationship Commitment and Their Association with Attachment Style and Locus of Control*. Georgia Institute of Technology. Retrieved from http://medcontent.metapress.com/index/A65RM03P4874243N.pdf

Brown, A., & Adams, J. (2000). Measuring the effect of project management on construction outputs: a new approach. *International Journal of Project Management*, *18*(5), 327-335.

Bryman, A., & Bell, E. (2007). *Business research methods*: Oxford University Press, Incorporated.

Buckley, P. J., & Enderwick, P. (1989). Manpower Management. In P. Hillebrandth & J. Cannon (Eds.), *The Management of Construction Firms: Aspects of Theory*. London: Macmillan.

Buvik, M. P., & Tvedt, S. D. (2016). The impact of commitment and climate strength on the relationship between trust and performance in cross-functional project teams. *Team Performance Management*, *22*(3/4), 114–138.

Campion, M.A, Fink, A., Ruggeberg, B.J., Carr, L., Phillips, G & Odman, R.B. (2011).Doing Competencies well: Best practices in competency modeling. *Personnel Psychology*, 64(1), 225-262.

Cardy R.L. & Selvarajan T.T. (2006). Competencies: Alternative frameworks for competitive advantage. *Business Horizons*, 49(3), 235-245.

Carey, P., Subramaniam, N., & Ching, K. C. W. (2006). Internal audit outsourcing in Australia. *Accounting & Finance*, *46*(1), 11-30.

Carroll, A. & McCrackin, J. (1998).The competent use of competency-based strategies for selection and development. *Performance Improvement Quarterly*, 11(3), 45-63.

Cavana, R. Y., Delahaye, B. L., & Sekaran, U. (2001). *Applied business research: Qualitative and Quantitative Methods* (Australian ed ed.). Milton, Qld.: Wiley.

CCTA (2000).Central Computer and Telecommunication Agency – Managing the business benefits. *The Antidote*, 27, 28-29

Chambel, M. J., & Curral, L. (2005). Stress in academic life: work characteristics as predictors of student well-being and performance. *Applied psychology*, *54*(1), 135-147.

Chan, A. P. (2000). Evaluation of enhanced design and build system–a case study of a hospital project. *Construction Management & Economics*, *18*(7), 863-871.

Chan, A. P. C., Scott, D., & Lam, E. W. M. (2002). Framework of success criteria for Design-Build projects. *Journal of Management in Engineering*, *18*(3), 120–128.

Chan, A. P., Yu, A., & Tam, C. M. (1999). Enhanced design build—an innovative system to procure a hospital project. In: Lam, E., Chan, A., & Chan, D. (2003). Why is design-build commonly used in the public sector? An illustration from Hong Kong. *Construction Economics and Building*, *3*(1), 53-62.

Chan, A.P.C., Scott, D. & Chan, A.P.L. (2004). Factors affecting the success of a construction project. *Journal of Construction Engineering Management*, *130*(1), 153-155

Chan, D. W., & Kumaraswamy, M. M. (1997). A comparative study of causes of time overruns in Hong Kong construction projects. *International Journal of project management*, *15*(1), 55-63.

Chan, E. & Yu, A. (2005). Contract Strategy for Design Management in the Design and Build System. *International Journal of Project Management*, *23*(3), 630-39.

Chan, S. L., & Park, M. (2005). Project cost estimation using principal component regression. *Construction Management and Economics*, *23*(3), 295-304.

Chang, C. Y., & Ive, G. (2007). The hold-up problem in the management of construction projects: A case study of the Channel Tunnel. *International Journal of Project Management*, *25*(4), 394-404.

Chang, C., & Ive, G. (2000). *A Comparison of Two Ways of Applying Transaction Costs Approach (I): Methodological Debates*. Research Paper. Bartlett School of Graduate Studies. University College. London.

Chartered Institute of Building (CIOB) UK (2010). Procurement in the Construction Industry.

Cheetham, G. & Chivers, G. (1998). The reflective (and competent) practitioner: a model of professional competence which seeks to harmonize the reflective practitioner and competence-based approaches, *Journal of European Industrial Training*, 22(7), 267 – 276.

Cheetham, G., & Chivers, G. (1996). Towards a holistic model of professional competence. *Journal of European Industrial Training*, *20*(5), 20–30.

Chen, Q., Jin, Z., Xia, B., Wu, P., & Skitmore, M. (2016). Time and cost performance of Design-Build projects. *Journal of Construction Engineering and Management*, *142*(2), 1–7.

Chen, W., & Hirschheim, R. (2004). A paradigmatic and methodological examination of information systems research from 1991 to 2001. *Information Systems Journal*, *14*(3), 197-235.

Cheung, S. O., Tam, C. M., Ndekugri, I., & Harris, F. C. (2000). Factors affecting clients' project dispute resolution satisfaction in Hong Kong. *Construction Management & Economics*, *18*(3), 281-294.

Chin, W. W. (1998). Issues and Opinion on Structural Equation Modeling, Editorial. *MIS Quarterly*, 1-1. Retrieved from http://search.ebscohost.com.

Chin, W. W. (2010). How to write up and report PLS analyses. In V. E. Vinzi, W. W. Chin, J. Henseler & H. Wang (Eds.), *Handbook of Partial Least Squares* (pp. 655-690): Springer.

Chong , C. C. (1998). Public Sector Design and Build Practices (JTC). *Paper presented at the seminar organized by the Construction Industry Development Board* (CIDB), Singapore.

Christoffersen, A. K., & Emmitt, S. (2009). Case Study Exploring the Value Universe: A Values-Based Approach to Design Management. *Architectural Management: International Research and Practice*, 34-52.

Chua, D. K. H., Kog, Y. C., & Loh, P. K. (1999). Critical success factors for different project objectives. *Journal of construction engineering and management*, *125*(3), 142-150.

CIDB (2015). Bulletin statistic pembinaan suku tahunan, available at http://www.cidb.gov.my/V6/?9=en/content/082.Accessed on 19th June 2015.

Coase, R. H. (1937). The nature of the firm. *Econometrica, 4*, 386-405.

Coase, R. H. (1960). The Problem of Social Cost. *Journal of Law and Economics, 3*, 1-44.

Coase, R. H. (1988). The Nature of the Firm: Origin, Meaning, and Influence. *Journal of Law and Economics, 4*(1), 3-59.

Cohen, A. (2003). *Multiple Commitments in the Workplace: An Integrative Approach*. London: Lawrence Erlbaum Associates Publishers.

Cohen, A. (2007). Commitment before and after: An evaluation and reconceptualization of organizational commitment. *Human Resource Management Review*, *17*(3), 336-354.

Cohen, A. (2013). Organizational Commitment Theory. In: *Encyclopedia of Management Theory*, 527–529.

Cohen, J. (1988). *Statistical power analysis for the behavioral sciencies*: Routledge

Coltman, T., Devinney, T. M., Midgley, D. F., & Venaik, S. (2008). Formative versus reflective measurement models: Two applications of formative measurement. *Journal of Business Research*, *61*(12), 1250–1262.

Cooke-Davies, T. (2002). The "real" success factors on projects. *International journal of project management*, *20*(3), 185-190.

Cooper, K. C. (2000). *Effective Competency Modeling and Reporting* (New York: Amacom).

Currie, G., & Darby, R. (1995). Competence-based management development: rhetoric and reality. *Journal of European Industrial Training, 19*(5), 11-18.

Daft, L. R. (2009). *Organization Theory and Design* (Tenth ed.). Mason, OH: South-Western, Sengage Learning.

Dainty, A. R., Cheng, M., & Moore, D. R. (2004). A competency-based performance model for construction project managers. *Construction Management and Economics, 22*, 877-886.

Dalkey, N. C. (1972). Studies in the quality of life: Delphi and decision-making. In: *The Delphi method: An experimental study of group opinion* , 13–54. Lexington, MA: Lexington Books.

David, R. J., & Han, S. K. (2004). A systematic assessment of the empirical support for transaction cost economics. *Strategic Management Journal*, *25*(1), 39-58.

De Clercq, D., & Rius, I. B. (2007). Organizational commitment in Mexican small and medium-sized firms: The role of work status, organizational climate, and

entrepreneurial orientation. *Journal of Small Business Management*, *45*(4), 467-490.

De Silva, H., & Ratnadiwakara, D. (2008). Using ICT to reduce transaction costs in agriculture through better communication: A case-study from Sri Lanka. *LIRNEasia, Colombo, Sri Lanka, Nov*.

Delamare Le Deist, F., & Winterton, J. (2005). What is Competence? *Human Resource Development International*, *8*(1), 27–46.

Delbecq, V. G. (1975). Group techniques for program planning. Retrieved from http://en.wikipedia.org/wiki/Selahattin_Demirta?

Dey, T., Kumar, A., & Kumar, Y. L. N. (2014). A new look at the antecedents and consequences of organizational commitment: A conceptual study. *International Journal of Humanities and Social Science*, *4*(1), 281–287.

Diekmann, J. E., & Girard, M. J. (1995). Are contract disputes predictable?. *Journal of construction engineering and management*, *121*(4), 355-363.

Dosi, G., & Teece, D. J. (1998). Organizational competencies and the boundaries of the firm. In *Markets and organization* (pp. 281-302). Springer Berlin Heidelberg.

Draganidis F. & Mentzas G. (2006). Competency based management: a review of systems and approaches. *Information Management & Computer Security*, Volume 14 (1), 51-64.

Dreamstime (2015). Map of Malaysia. Retrieved from: Retrieved from www.dreamstime.com on 10 January, 2015.

Dubois, D. A. & Rothwell, W. J. (2004).*Competency-Based Human Resource Management* (Palo-Alto, CA: Davies-Black).

Dubois, D. D. (1998). *The competency casebook: twelve studies in competency-based performance improvement*. Human Resource Development. HRD Press, Inc.

Dudkin, G., & Valila, T. (2005). *Transaction Costs in Public-Private Partnerships: A First Look at the Evidence* (H54, L33, C14). Helsinki: European Investment Bank.

Eccles, R. G. (1981a). Bureaucratic versus Craft Administration: The Relationship of Market Structure to the Construction Firm. *Administrative Science Quarterly*, *26*(3), 449-469.

Eccles, R. G. (1981b). The quasifirm in the construction industry. *Journal of Economic Behavior & Organization*, *2*(4), 335-357.

Edwards, J. R. (2001). Multidimensional constructs in organizational behavior research: An integrative analytical framework. *Organizational Research Methods*, *4*(2), 144-192.

Edwards, J. R., & Bagozzi, R. P. (2000). On the nature and direction of relationships between constructs and measures. *Psychological methods*, *5*(2), 155-174.

Egan, J. (1998). Rethinking Construction, Construction Task Force Report for Department of the Environment, Transport and the Regions.

Ehrhardt, K., Miller, J.S., Freeman, S.J. & Hom, P.W. (2013). Examining project commitment in cross-functional teams: antecedents and relationship with team performance. *Journal of Business and Psychology*, *29*(3), 443-461.

Eisenberger, R., Fasolo, P., & Davis-LaMastro, V. (1990). Perceived organizational support and employee diligence, commitment, and innovation. *Journal of Applied Psychology*, *75*(1), 51-59

Emzen, J.J., & SChexnayder, C. (2000). One company's experience with design-build: labor cost risk and profit potential. *Journal of Construction Engineering and Management, 126*(1), 10-14.

Ennis, M. (2008). A review of the literature and the role of the employment and training administration (ETA). *U.S. Department of Labor*, 1-25.

Eriksson, P. E. (2007). *Efficient Governance of Construction Projects through Cooperative Procurement Procedures*. (Doctoral dissertation, Luleå University of Technology, Luleå, Sweden).

Erridge, A., Fee, R., & McIlroy, J. (1999). An assessment of competitive tendering using transaction cost analysis. *Public Money and Management*, *19*(3), 37-42.

Farajian, M. (2010). *Transaction cost estimation model for US infrastructure public private partnerships*. (Doctoral dissertation, University of Maryland, College Park, MD.

Farbey, B., Land, F., & Targett, D. (1999a). How to Evaluate Your IT Investment: A Study of Methods and Practice, Oxford, Butterworth Heinemann.

Farbey, B., Land, F., & Targett, D. (1999b). The moving staircase-Problems of appraisal and evaluation in a turbulent environment. *Information Technology & People*, *12*(3), 238-252.

Faught, A., & Tran, D. (2015). Communication issues in Design-Build project delivery method. In *International Construction Specialty Conference*.

Faught, A., & Tran, D. (2015). Communication issues in design-build project delivery method. Retrieved from: www. open.library.ubc.ca

Fisher, D. J., Schluter, L., & Toleti, P. K. (2005). Project management education and training process for career development. *Journal of construction engineering and management*, *131*(8), 903-910.

Fornell, C., & Bookstein, F. L. (1982). Two structural equation models: LISREL and PLS applied to consumer exit-voice theory. *Journal of Marketing Research*, 440-452.

Forza, C. (2002). Survey research in operations management: a process-based perspective. *International Journal of Operations & Production Management, 22*(2), 152-194.

Fourie, J. A. (2013). *The impact of transaction costs in incomplete contracts on prices submitted in the tendering process*. (Master's dissertation, University of Pretoria).

Fox, S. (2008). Evaluating potential investments in new technologies: Balancing assessments of potential benefits with assessments of potential disbenefits, reliability and utilization. *Critical Perspectives on Accounting*, *19*(8), 1197-1218.

Frank, F., Melese, F., Angelis, D., & Dillard, J. (2007). Applying insights from transaction cost economics to improve cost estimates for public sector purchases: The case of US military acquisition. *International Public Management Journal, 10*(4), 357-385.

Future and Innovation Unit (2001).Creating Value from Your Intangible Assets. London, Department of Trade and Industry (UK).

Gable, G., Rosemann, M., & Sedera, D. (2001). Using Performance Measurement Models for Benefit Realization with Enterprise Systems-The Queensland Government Approach (Case Study).

Gale, A. (2004). Competencies: Organizational and personal. In P.W.G. Morris & J.K. Pint (Eds).*The Wiley Guide to Managing Projects* (pp. 1087- 1111). New Jersey: John Wiley & Sons, Inc.

Gambo, M. M. (2011). *A study of current design & build procurement approach practice based on the client's specific expectations in the Malaysian construction industry* (Master dissertation, Universiti Tun Hussein Onn Malaysia).

Gambo, M. M. (2015). Project Characteristics for Design and Build Procurement Approach in the Malaysian Construction Industry. *Journal of Engineering and Technology (JET)*, *6*(1), 144-154.

Gammie, E., & Joyce, Y. (2009). Competence-based Approaches to the Assessment of Professional Accountancy Training Work Experience Requirements: The ICAS Experience. *Accounting Education*, *18*(4), 443-466.

Ghalayini, A. M., Noble, J. S., & Crowe, T. J. (1997).An integrated dynamic performance measurement system for improving manufacturing competitiveness. *International Journal of production economics*, *48*(3), 207-225.

Ghosh, S. (2014). A Literature Review on Organizational Commitment–A Comprehensive Summary. *International Journal of Engineering Research and Applications*, *1*(4), 4-14.

Glynne, P. (2007). Benefits management-changing the focus of delivery. *Association for Progress Management Yearbook 2006/07*, 45-49.

Godbout, A. J. (2000). Managing core competencies: The impact of knowledge management on human resources practices in leading-edge organizations. *Knowledge and Process Management,* 7(2), 76–86.

Gomes, J., Romão, M., Carvalho, H., & Caldeira, M. (2014). Organizational maturity and projects performance. *International Conference on Web Information Systems and Technologies*.

Gould-Williams, J. S. (1999). *The Impact of 'High Performance' HRM Practices on Employee Commitment, Service Quality and Value: A Study Conducted in the Hotel Sector*. (Doctoral dissertation, University of Wales).

Gransberg, D. D., Koch, J. E., & Molennar, K. R. (2006). Preparing for design-build projects: A primer for owners, engineers, and contractors. ASCE.

Greenwood, D. J., & Yates, D. J. (2006). The determinants of successful partnering: A transaction cost perspective. *Journal of Construction Procurement, 12*(1), 4-22.

Griffith, A., Knight, A. & King, A. (2003).*Best Practice Tendering for Design and Build Projects*. Ist Edition ed. London: Thomas Telford.

Günhan, S., Arditi, D., & Doyle, J. (2007). Avoiding change orders in public school construction. *Journal of Professional Issues in Engineering Education and Practice, 133*(1), 67-73.

Gunnarson, S., & Levitt, R. E. (1982). Is a Building Construction Project a Hierarchy or a Market? *Symposium conducted at the meeting of the 7th World Congress on Project Management*, Copenhagan.

Hackett, R. D., Bycio, P., & Hausdorf, P. A. (1994). Further assessments of Meyer and Allen's (1991) three-component model of organizational commitment. *Journal of applied Psychology, 79*(1), 15.

Hair Jr, J. F., Hult, G. T. M., Ringle, C., & Sarstedt, M. (2014). *A primer on partial least squares structural equation modeling (PLS-SEM)*: SAGE Publications, Incorporated.

Hair Jr, J. F., Hult, G. T. M., Ringle, C., & Sarstedt, M. (2016). *A primer on partial least squares structural equation modeling (PLS-SEM)*. Sage Publications.

Hair Jr, J. F., Ringle, C. M., & Sarstedt, M. (2013). Partial Least Squares Structural Equation Modeling: Rigorous Applications, Better Results and Higher Acceptance. *Long Range Planning*.

Hair, J. F., & Anderson, R. E. (2010). *Multivariate data analysis* (7th ed.): Prentice Hall Higher Education.

Hair, J. F., Ringle, C. M., & Sarstedt, M. (2011). PLS-SEM: Indeed a silver bullet. *The Journal of Marketing Theory and Practice, 19*(2), 139-152.

Hair, J. F., Sarstedt, M., Ringle, C. M., & Mena, J. A. (2012). An assessment of the use of partial least squares structural equation modeling in marketing research. *Journal of the Academy of Marketing Science, 40*(3), 414-433.

Hale, D. R. & Shrestha, P. P. (2009). Empirical Comparison of Design/Build and Design/Bid/Build Project Delivery Methods. *Journal of Construction Engineering and Management*, 135(7), 578-87.

Hale, D.R., Shrestha, P.P., Gibson, G.E., & Migliaccio, G.C., (2009). Empirical comparison of Design-Build and Design-Bid-Build project delivery methods, *Journal of Construction Engineering and Management*, *135* (7), 579-587.

Harrington, M. (2012). Employee Development: competency, commitment and handling problem behavior in employee's-new directions consulting. Retrieved August 21, 2016, from http://www.newdirectionsconsulting.com

Harris, K., Sapountzis, S., & Kagioglou, M. (2008). The methodological development of a benefits realization management process (BRMP) in the case of Manchester, Salford and Trafford (MaST) Local Improvement Finance Trust (LIFT). In *8th BuHu International Postgraduate research conference*. University of Salford, 337–345. Retrieved from http://usir.salford.ac.uk/18406/

Hashim, Abdul Rashid, R., Mat Taib, I., Ahmad, W., Basiron, W., Nasid, M., Wan Ali, W. N., & Mohd Zainordin, Z , (2006). Factors Influencing the Selection of Procurement Systems by Clients. In International Conference on Construction Industry. Padang, Indonesia.

Hassim, S., Sazalli, S.A.A. & Jaafar, M.S. (2008).Identification of Sources of Risk in IBS Project. *European Journal of Social Sciences, 6*(3), 315-24.

Henseler, J., & Sarstedt, M. (2013). Goodness-of-fit indices for partial least square path modeling. *Computational Statistics*, *28*(2), 565–580.

Henseler, J., Ringle, C. M., & Sarstedt, M. (2012). 12 Using partial least squares path modeling in advertising research: basic concepts and recent issues. *Handbook of research on international advertising*, 252.

Ho, P., & Tsui, C. (2009. *The transaction costs of Public-Private Partnerships: implications on PPP governance design*. Presented at the meeting of the Lead 2009 Specialty Conference: Global Governance in Project Organisations, South Lake Tahoe, CA.

Hodkinson, P. & Issitt, M. (1995). *The Challenge of Competence* (London: Cassell Education).

Hoegl, M., Weinkauf, K., & Gemuenden, H. G. (2004). Interteam coordination, project commitment, and teamwork in multiteam R&D projects: A longitudinal study. *Organization science*, *15*(1), 38-55.

Hooley, G., Broderick, A., & Möller, K. (1998). Competitive positioning and the resource-based view of the firm. *Journal of Strategic Marketing, 6*(2), 97-116.

Horan, P. (2010). *Developing an effectiveness evaluation framework for destination management systems* (Doctoral dissertation, Queen Margaret University).

Howell, G., Laufer, A., & Ballard, G. (1993).Uncertainty and project objectives. *Project Appraisal*, *8*(1), 37-43.

Hreboniak, L. G. & Alutto, J. A. (1972). Personal and role related factors in the development of organizational commitment. *Administrative Science Quarterly*, 17, 555 – 573.

Hsu, C. C., & Sandford, B. A. (2007). The Delphi technique: making sense of consensus. *Practical assessment, research & evaluation*, *12*(10), 1-8.

Hua, C. S. (2010). *An empirical analysis of project manager's competency, empowerment and learning in agent construction management system in China*. (Doctoral thesis, University of Hong Kong).

Hughes, W., Hillebrandt, P., Greenwood, D. & Kwawu, W. (2006). *Procurement in the Construction Industry: The Impact and Cost of Alternative Market and Supply Processes*, Taylor and Francis, London and New York, NY.

Hunter, L. W., & Thatcher, S. M. (2007). Feeling the heat: Effects of stress, commitment, and job experience on job performance. *Academy of Management Journal*, *50*(4), 953-968.

Hutton, P. F. (1990). *Survey Research for Managers: How to Use Survey in Management Decision Making*. 2nd edition, Basingstoke: MacMillan

Ibbs, C.W., Kwak, Y.H., Ng, T., & Odabasi, A. M. (2003). Project delivery systems and project change: Quantitative analysis. *Journal of Construction Engineering and Management*, *129*(4), 382–387.

Iles, P. (2001). Employee resourcing. In Journal Storey (Ed.), *Human Resource Management: A Critical Text* (2nd ed., pp 133-164). London: Routledge.

Ing, W. T. (2009). *The potential of objective-subjective as project procurement approach* (Master`s dissertation, Universiti Teknologi Malaysia, Faculty of Civil Engineering).

Irdayanti, M. N., Ramlee, M., & Abdullah, Y. (2015). Delphi Technique: enhancing research in technical and vocational education. *Journal of Technical Education and Training*, *7*(2), 12–23.

Isa, H. M., Isnin, Z. & Sapeciay, Z. (2011). Learning from defects in design and build hospital projects in Malaysia. In: *International Conference on Social Science and Humanity.* 5, 238-242.

Isik, Z., Arditi, D., Dilmen, I., & Talat Birgonul, M. (2010). The role of exogenous factors in the strategic performance of construction companies. *Engineering, Construction and Architectural Management*, *17*(2), 119-134.

Ismail, D., Zin, R. A., & Latif, H. M. (2006). Services provided by project management consultant in Malaysian Construction Industry. *International conference in the Built Environment in the 21st Century*, 267.

Iverson, R. D. & Buttigieg, D. M. (1999). Affective, normative and continuance commitment: Can the right kind of commitment be managed. *Journal of Management Studies*, 36, 307 –333.

Jaafar, M., & Aziz, A. A. (2009). Procurement reform in public sector governance: A timely necessity. *The Malaysian Surveyor*, *44*(2), 25-29.

Jaafar, M., & Radzi, N. M. (2012). Building procurement in a developing country: a comparison study between public and private sectors. *International Journal of Procurement Management*, *5*(5), 608-626.

Jaafar, M., & Radzi, N. M. (2013). Level of satisfaction and issues with procurement systems used in the Malaysian public sector. *Australasian Journal of Construction Economics and Building*, *13*(1), 50–65.

Jackson, S. E., & Schuler, R. S. (2003). *Managing human resources through strategic partnerships*.South-Western Pub.

Jacobides, M. G. (2008). How Capability Differences, Transaction Costs, and Learning Curves Interact to Shape Vertical Scope. *Organization Science*, *19*(2), 306-326.

Jacobides, M. G., & Winter, S. G. (2005). The co-evolution of capabilities and transaction costs: Explaining the institutional structure of production. *Strategic Management Journal*, *26*(5), 395-413.

Jarvis, C. B., MacKenzie, S. B., & Podsakoff, P. M. (2003). A critical review of construct indicators and measurement model misspecification in marketing and consumer research. *Journal of consumer research*, *30*(2), 199-218.

Jasri, S. A. A. (2011). *Disputes in design and build construction contract* (Master dissertation, Universiti Teknologi Malaysia, Faculty of Built Environment).

Jenner, S. (2014). Benefits Realization–Building on (un) Safe Foundations or Planning for Success?. *Advances in Project Management: Narrated Journeys in Unchartered Territory*, 157.

Jin, X. H. (2011). Model for efficient risk allocation in privately financed public infrastructure projects using neuro-fuzzy techniques. *Journal of construction engineering and management*, *137*(11), 1003-1014.

Jin, X., & Zhang, G. (2011). Modeling optimal risk allocation in PPP projects using artificial neural networks. *International Journal of Project Management*, *29*(5), 591-603.

Jin, X.-H., Zhang, G., Ke, Y., & Xia, B. (2016). Factors influencing transaction costs in construction projects: a critical review. In: *et al.* (eds. Wu (Ed.), *Proceedings of the 20th International Symposium on Advancement of Construction Management and Real Estate*, 949–958. Springer Science, Business Media Singapore.

Jobin, D. (2008). A transaction cost-based approach to partnership performance evaluation. *Evaluation*, *14*(4), 437-465.

Johnson, R. E., Rosen, C. C., Chang, C.-H. D., Djurdjevic, E., & Taing, M. U. (2012). Recommendations for improving the construct clarity of higher-order multidimensional constructs. *Human Resource Management Review, 22*(2), 62-72.

Jones, K. (2011). The practice of Quantitative Methods. In B. Somekh & C. Lewin (Eds.), *Theory and Methods in Social Research* (2 ed.): SAGE Publications.

Joskow, P. L. (2002). Transaction Cost Economics, Antitrust Rules, and Remedies. *Journal of Law, Economics, and Organization, 18*(1), 95-116.

Kandola, R. & Pearn, M. (1992). Identifying competencies. In R. Boam & P. Sparrow (Eds.), *Designing and Achieving Competency: A Competency-Based Approach to developing People and Organizations*, 31-49. London: Mc Graw-Hill Book Company.

Kaplan, R. S., & Norton, D. P. (2005). The balanced scorecard: measures that drive performance. *Harvard business review, 83*(7), 172.

Kebede, E. (2011). *The application of transaction cost economics to UK defense acquisition*. (Doctoral thesis, University of Manchester).

Keren, G., & De Bruin, W. B. (2003). On the assessment of decision quality: considerations regarding utility, conflict and accountability. In: Hardman, D.; Macchi, L. (Eds.). *Psychological perspectives on reasoning, judgment and decision making*. Hoboken: John Wiley & Sons, 347–363.

Kerk, K.H. (2003). Computer lab scandal: Education Minister Tan Sri Musa Mohamad must be prepared to really tell all, available at: www.dapmalaysia.org/newenglish (accessed 17 April 2015).

Khodadadei, N., Rezaei, B., & Salehi, S. (2016). Investigating the relationship of organizational commitment and clinical competence (Case study : nurses working in Montazeri Hospital, City of. *International Journal of Medical Research & Health Sciences, 5*(5), 308–316.

Klarner, P., Sarstedt, M., Hoeck, M., & Ringle, C. M. (2013). Disentangling the effects of team competences, team adaptability, and client communication on the performance of management consulting teams. *Long Range Planning, 46*(3), 258–286.

Klein, B. (1980). Transaction Cost Determinants of "Unfair" Contractual Arrangements. *The American Economic Review, 70*(2), 356-362.

Klein, B. (2005). The make-or-buy decision: Lessons from empirical studies. In: *Handbook of New Institutional Economics, 4,* 435-464. Netherlands: Springer US.

Koeppen, K., Hartig, J., Klieme, E. & Leutner, D. (2008).Current issues in competence modeling and assessment. *Journal of Psychology*, 216(2), 61– 73.

Konchar, M. & Sanvido, V. (1998). Comparison of US Project delivery systems. *Journal of Construction Engineering and Management, 124*(6): 435 – 444

Konovsky, M. A., & Cropanzano, R. (1991). Perceived fairness of employee drug testing as a predictor of employee attitudes and job performance. *Journal of applied psychology*, *76*(5), 698.

Koskela, L. (2000). *An exploration towards a production theory and its application to construction*. VTT Technical Research Centre of Finland.

Koskela, L. J., & Howell, G. (2001). Reforming project management: the role of planning, execution and controlling. In: *Proceedings of 9th International Group for Lean Construction Conference*. (185-198).

Kumaraswamy, M. M. (1997). Conflicts, claims and disputes in construction. *Engineering, Construction and Architectural Management*, *4*(2), 95-111.

Kumaraswamy, M. M., & Thorpe, A. (1995). Construction project evaluation using appropriate indicators. *NICMAR Journal*.

Kurtz, R. & Bartman, D. (2002). Competency and individual performance: Modeling the world of work. In I.T. Robertson, M. Callinan & D. Bartman (Eds.), *Organizational Effectiveness: The role of psychology* (pp. 227-255). New York: John Wiley & Sons, Inc.

Lam, E. W., Chan, A. P., & Chan, D. W. (2003). Potential problems of running design-build projects in construction. *HKIE Transactions*, *10*(3), 8-14.

Langford, D., Hancock, M. R., Fellows, R., Gale, A. W., & Raftery, J. (1995). *Human Resources Management in Construction*. Essex, UK: Longman Scientific & Technical.

Laufer, A. (1991). Project planning: Timing issues and path of progress. Project Management Institute.

Law, K. S., Wong, C. S., & Mobley, W. M. (1998). Toward a taxonomy of multidimensional constructs. *Academy of Management Review*, *23*(4), 741-755.

Lawler, E.E. (1994). From job-based to competency-based organizations. *Journal of Organizational Behavior*, 15, 3-15.

Lee, H. S., Seo, J. O., Park, M., Ryu, H. G., & Kwon, S. S. (2009). Transaction-cost-based selection of appropriate general contractor-subcontractor relationship type. *Journal of Construction Engineering and Management*, *135*(11), 1232-1240.

Lee, S.C., & Liu, C.Y. (2006). Governance structures of alliances: Transaction costs versus competence perspective. *Journal of Global Business Management*, *2*(2).

Leiblein, M. J., & Miller, D. J. (2003). An empirical examination of transaction-and firm-level influences on the vertical boundaries of the firm. *Strategic Management Journal*, *24*(9), 839-859.

Leung, M. Y., Chan, Y. S., & Yu, J. (2009). Integrated model for the stressors and stresses of construction project managers in Hong Kong. *Journal of Construction Engineering and Management*, *135*(2), 126-134.

Leung, M. Y., Chen, D., & Yu, J. (2008). Demystifying moderate variables of the interrelationships among affective commitment, job performance, and job satisfaction of construction professionals. *Journal of Construction Engineering and Management*, *134*(12), 963-971.

Leung, M. Y., Chong, A., Ng, S. T., & Cheung, M. C. K. (2004). Demystifying stakeholders' commitment and its impacts on construction projects. *Construction Management and Economics, 22*(7), 701-715.

Leung, M., & Chan, H. K. L. (2007). Antecedents of commitment in construction management. *Construction Management and Economics, 25*(2), 113-127

Leung, M., Zhang, H., & Skitmore, M. (2008). Effects of organizational supports on the stress of construction estimation participants. *Journal of Construction Engineering and Management, 134*(2), 84–93.

Levenson, A. R., Van der Stede, W. A., & Cohen, S. G. (2009). Measuring the relationship between managerial competencies and performance. *Journal of Management, 32*(3), 360-380.

Levy, S. (2006). *Design and Build: Project Delivery*. New - York: Mc Graw – Hill.

Lewis, H. F., Lock, K. A., & Sexton, T. R. (2009). Organizational capability, efficiency, and effectiveness in Major League Baseball: 1901–2002. *Eurospean Journal of Operational Research*, *197*(2), 731-740.

Leyton, R. (1995). Investment appraisal: the key for IT? In Farbey, B., Land, F., & Targett, D. (Eds.) Hard Money, Soft Outcomes. Henley on Thames, Alfred Waller Ltd, in association with Unicom.

Li, H., Arditi, D., & Wang, Z. (2013). Factors that affect transaction costs in construction projects. *Journal of Construction Engineering & Management, 139*(1), 60–68.

Li, H., Arditi, D., & Wang, Z. (2014). Transaction costs incurred by construction owners. *Engineering, Construction and Architectural Management, 21*(4), 444–458.

Li, H., Arditi, D., & Wang, Z. (2015). Determinants of transaction costs in construction projects. Journal of Civil Engineering and Management, 139(1), 60–68.

Lichtenberg, J. W., Portnoy S. M., Bebeau M. J., Leigh I. W., Nelson P.D. Rubin N. J., Smith I. L. & Kaslow N. J. (2007). Challenges to the assessment of competence and competencies. *Professional Psychology: Research and Practice by the American Psychological Association,* 38(5), 474–478.

Lim, C. S., & Mohamed, M. Z. (1999). Criteria of project success: an exploratory re-examination. *International Journal of Project Management, 17*(4), 243-248.

Limayem, M., Hirt, S. G., & Chin, W. W. (2001). *Intention does not always Matter: The Contingent Role of Habit in IT Usage Behaviour*. Paper presented at the ECIS.

Limsila, K., & Ogunlana, S. O. (2008). Performance and leadership outcome correlates of leadership styles and subordinate commitment. *Engineering, Construction and Architectural Management, 15*(2), 164-184.

Lin, C., & Pervan, G. (2003). The practice of IS/IT benefits management in large Australian organizations. *Information & Management Journal, 41*(1), 13-24.

Ling, F. Y. Y. & Liu, M. (2004).Using neural network to predict performance of design-build. *Building and Environment*, 39, 1263 - 1274.

Ling, F.Y.Y. & Poh, B.H.M. (2008). Problems encountered by owners of design–build projects in Singapore. *International Journal of Project Management, 26*(1), 164-173.

Lingard, H., & Lin, J. (2004). Career, family and work environment determinants of organizational commitment among women in the Australian construction industry. *Construction Management and Economics, 22*(4), 409-420.

Lingard, H., Hughes, W., & Chinyio, E. (1998). The impact of contractor selection method on transaction cost: A review. *Journal of Construction Procurement, 4*(2), 89-102.

Linstone, H. A., & Turoff, M. (Eds.). (1975). *The Delphi method: Techniques and applications, 29*. Reading, MA: Addison-Wesley.

Liu, A. M. M., Chiu, W. M., & Fellows, R. (2007). Enhancing commitment through work empowerment. *Engineering, Construction and Architectural Management, 14*(6), 568-580.

Liu, X., Ruan, D., & Xu, Y. (2005). A study of enterprise human resource competence appraisement. *Journal of Enterprise Information Management, 18*(3), 289-315.

Locke, E. A. (1991). The motivation sequence, the motivation hub, and the motivation core. *Organizational behavior and human decision processes, 50*(2), 288-299.

Love, P. E., Edwards, D. J., Irani, Z., & Walker, D. H. (2009). Project pathogens: The anatomy of omission errors in construction and resource engineering project. *IEEE Transactions on Engineering Management, 56*(3), 425-435.

Love, P. E., Irani, Z., Standing, C., Lin, C., & Burn, J. M. (2005). The enigma of evaluation: benefits, costs and risks of IT in Australian small–medium-sized enterprises. *Information & Management, 42*(7), 947-964.

Lowman, R. L. (1993). *Counseling and psychotherapy work dysfunctions*. Washington: American Psychological Association.

Lubbe, L.L. (2010). A competency model for security officers: A qualitative design. (Master's Thesis, University of South Africa).

Lubbe, L.L., & Barnard, A. (2013). Security guarding : A competency model Security guarding : a competency model. *South African Journal of Labor Relations, 37*(1), 79–96.

Ludwig, B. (1997). Predicting the future: Have you considered using the Delphi methodology? *Journal of Extension, 35*(5), 1-4. Retrieved October 12, 2015 from http://www.joe.org/joe/1997october/tt2.html

Luna-Arocas, R., & Camps, J. (2007). A model of high performance work practices and turnover intentions. *Personnel Review, 37*(1), 26-46.

Lynch, D. T. (1996). *A Transaction Cost Framework for Evaluating Construction Project Organizations*. (Doctoral dissertation, the Pennsylvania State University, Pennsylvania.

Mahajar, A. J., & Mohd Yunus, J. B. (2014). The relationship between demography and competency towards organizational commitment of banking sector in Malaysia. *International Journal of Humanities Social Sciences and Education (IJHSSE), 1*(11), 65–72.

Mahmood, A., Hamidaddin, M. A. A., & Shafiei, M. W. M. (2006). What Competencies Do project Managers Need? LCCI - 2006, 1-9. Retrieved from http://eprints.usm.my/2827/3/indexcodes.txt

Maison, H., Melissa, C. Y., Ng Sock, H., Shim Mong, H., & Tay Lee, Y. (2006).Factors influencing the selecting of procurement systems by clients. In: *Proceeding of International Conference on Construction on Construction Industry, Padang, Indonesia,* 1-10.

Malhotra, M. K., & Grover, V. (1998). An assessment of survey research in POM: from constructs to theory. *Journal of Operations Management, 16*(4), 407-425.

Manetje, O., & Martins, N. (2009). The relationship between organizational culture and organizational commitment. *Southern African Business Review*, *13*(1), 87-111. Retrieved from http://reference.sabinet.co.za/sa_epublication_article/sabr_v13_n1_a5

Manley, K., & Garbett, R. (2000). Defining and assessing competence: issues and debates in. *Journal of Clinical Nursing*, *9*, 347-359.

Mansfield, R.S. (1996). Building competency models: Approaches for HR professionals. *Human Resource Management*, 35(1), 7-18.

Marchant,

Marrelli, A. F. (1998). An introduction to competency analysis and modeling. *Performance Improvement*, *37*(5), 8-17.

Maslić Seršić, D. (2000). An empirical test of Meyer and Allen's three-component model of organzational commitment in a Croatian context. *Review of Psychology*, *6*(1-2), 17-24.

Masrom, M. A., Skitmore, M., & Bridge, A. (2013). Determinants of contractor satisfaction. *Construction Management and Economics*, *31*(7), 761–779.

Masterman, J. W. E. (2002). *An Introduction to Building Procurement Systems*, 2nd ed., Spon Press, London.

Mathieu, J. E., & Zajac, D. M. (1990). A review and meta-analysis of the antecedents, correlates, and consequences of organizational commitment. *Psychological Bulletin*, *108*(2), 171-194.

McCann, L., & Easter, K. W. (2004). A framework for estimating the transaction costs of alternative mechanisms for water exchange and allocation. *Water Resources Research*, *40*(9).

McCann, L., Colby, B., Easter, K. W., Kasterine, A., & Kuperan, K. V. (2005). Transaction cost measurement for evaluating environmental policies. *Ecological economics*, *52*(4), 527-542.

McCartney, H. I. (2000). Successful IT: Modernizing Government in Action. Retrieved on 10 July, 2015, from: https://ntouk.files.wordpress.com/2015/06/successful-it-modernising-government-in-action-2000.pdf

McClelland, D. C. (1973). Testing for competence rather than for intelligence. *American Psychologist*, *28*, 1- 14.

McDonald, D. J. & Makin, P. J. (2000).The psychological contract, organizational commitment and job satisfaction of temporary staff. *Leadership and Organizational Development Journal*, *21* (2), 118 – 234.

Melese, F., & Franck, R. (2005). A Transaction Cost Economics View of DOD Outsourcing. *Naval Postgraduate School*. Symposium conducted at the meeting of the 2nd Annual Acquisition Research Symposium of the Naval Postgraduate School, California.

Melton, T., Yates, J., & Iles-Smith, P. (2011). *Project Benefits Management: Linking projects to the Business*. Butterworth-Heinemann.

Memon, N.A., Abro, Q.M.A. & Mugheri, F. (2011). Quality Management in the Design and Construction Phase: A Case Study. *Mehran University Research Journal of Engineering & Technology*, *30*(3), 50-61.

Meyer, J. P. & Allen, N. J. (1984). Testing the side bet theory of organizational commitment: Some methodological considerations. *Journal of Applied Psychology*, 69, 372 – 378.

Meyer, J. P. & Allen, N. J. (1991).A three-component conceptualization of organizational commitment. *Human Resources Management Review*, 1, 61 – 89.

Meyer, J. P. & Allen, N. J. (1997). C*ommitment in the workplace: Theory, research and application*. Thousand Oaks: Sage.

Meyer, J. P., & Herscovitch, L. (2001). Commitment in the workplace: Toward a general model. *Human Resource Management Review, 11*(3), 299-326.

Meyer, J. P., & Maltin, E. R. (2010). Employee commitment and well-being: A critical review, theoretical framework and research agenda. *Journal of Vocational Behavior*, *77*(2), 323–337.

Meyer, J. P., Allen, N. J. & Gellatly, I. R. (1990). Affective and continuance to the organization: Evaluation of measures and analysis of concurrent and time-lagged relations. *Journal of Applied Psychology*, 75, 710 – 720.

Meyer, J. P., Stanley, D. J., Herscovitch, L., & Topolnytsky, L. (2002). Affective, continuance, and normative commitment to the organization: A meta-analysis of antecedents, correlates, and consequences. *Journal of vocational behavior*, *61*(1), 20-52.

Mfongeh, N. G. (2010). *The constraints of using design and build for the procurement of construction projects in South Africa* (Doctoral dissertation, University of the Witwatersrand, Faculty of Engineering and the Built Environment).

Miller, D. & Lee, J. (2001). The people make the process: commitment to employees, decision-making and performance. *Journal of Management*, 27, 163 – 189.

Miller, K. (2003). Values, attitudes and job satisfaction. In S. P. Robbins; A. Odendaal & G. Roodt (Eds), *Organizational Behavior: Global and Southern African Perspectives* (65 - 82). Cape Town: Pearson Education South Africa.

Mitropoulos, P., & Howell, G. (2001). Model for understanding, preventing, and resolving project disputes. *Journal of Construction Engineering and Management*, *127*(3), 223-231.

Moeheriono, (2012). Pengukuran Kinerja Berbasis Kompetensi, Edisi Revisi, Jakarta: PT. Raja Grafindo Persada.

Mohamad, K. (2004). PMC is the source of the problem, not JKR, Utusan Malaysia, 14 November, available at: wwwutusan.com.my (accessed 2 June 2015).

Mohamed, N. H. (2005). *A case study on the management of UTM new hostel based on design and build arrangement* (Doctoral dissertation, Universiti Teknologi Malaysia, Faculty of Civil Engineering).

Mohyin, N. A. (2011). Managing commitment in small construction professional services firms. (Doctoral thesis, University of Loughborough). UK.

Molenaar, K. R., Songer, A. D., & Barash, M. (1999). Public-sector design/build evolution and performance. *Journal of Management in Engineering*, *15*(2), 54–62.

Monecke, A., & Leisch, F. (2012). SEM-PLS : Structural Equation Modeling Using Partial Least Squares. *Journal of Statistical Software*, *48*(3), 1–32.

Morrow, P. C. (1993).*The theory and measurement of work commitment*. Greenwich, CT: Jai.

Mosheim, R. (2002). Organizational type and efficiency in the Costa Rican coffee processing sector. *Journal of Comparative Economics*, *30*(2), 296-316.

Mowday, R. T., Porter, L. M. & Steers, R. M. (1982).*Organizational linkages: The psychology of commitment, absenteeism, and turnover*. San Diego: Academic Press.

Mowday, R. T., Steers, R. M., & Porter, L. W. (1979). The measurement of organizational commitment. *Journal of vocational behavior*, *14*(2), 224-247.

Müller, M., & Seuring, S. (2007). Reducing information technology-based transaction costs in supply chains. *Industrial Management & Data Systems*, *107*(4), 484-500.

Murphy, K. & Simon, S. (2002). Intangible benefits valuation in ERP projects. *Information Systems Journal*, 301-320.

Musawir, A. (2015). *Impact of Project Governance on Benefits Realization Management and Project Success: Towards a Framework for Supporting Organizational Strategy* (Doctoral dissertation, COMSATS Institute of Information Technology Lahore-Pakistan).

Muzio E., Fisher D.J., Thomas E.R. & Peters V. (2007). Soft skills quantification (SSQ) for project manager competencies. *Project Management Journal*, *38*(2), 30-38.

Naoum, S. G. (1994). Critical analysis of time and cost of management and traditional contracts. *Journal of Construction Engineering and Management*, *120*(4), 687-705.

Ndekugri, I. & Turner, A. (1994). Building Procurement by Design and Build. *Journal of Construction Engineering and Management*, *120*(4), 243-56.

Neely, A. D., Adams, C., & Kennerley, M. (2002). *The performance prism: The scorecard for measuring and managing business success*. London: Prentice Hall Financial Times.

NHS, (2005). Delivering Quality and Value: The ISIP Guide to Strategy and Benefits. Retrieved March 12, 2015 from: http://www.wheelchairmanagers.nhs.uk.

Nitithamyong, P. & Tan, Z. (2007). Determinants for Effective Performance of External Project Management Consultants in Malaysia Engineering, *Construction and Architectural Management* (14)5, 463-478.

Nogeste, K., & Walker, D. H. (2005). Project outcomes and outputs: making the intangible tangible. *Measuring Business Excellence*, *9*(4), 55-68.

Nogeste, K., & Walker, D. H. (2008).Development of a method to improve the definition and alignment of intangible project outcomes and tangible project outputs. *International Journal of Managing Projects in Business*, *1*(2), 279-287.

Nogueira, A. C. L., & Bataglia, W. (2012). Transaction costs and organizational competences: Explaining the governance structure for manufacturing stage. *Journal of Technology Management and Innovation*, *7*(1), 159–174.

Nor, M. A. (2009).Statistical methods in Research. Published by Prentice Hall. Pearson Malaysia Sdn Bhd.

O'Reilly, C. (1989). Corporations, culture and commitment. *California Management Review*, 31, 9 -24.

Office of Human Resources (2005).Behavioral competency model-exempt. Retrieved on 15 March, 2015. Notre Dame Web Group.

Ofori, G. (2007). Procurement reform: A research agenda for construction in developing Countries: *In Proceeding of CIB World Building Congress*, Cape Town, South Africa.

OGC (2003).Managing Successful Programmes, London. The Stationary Office.

OGC (2007a).Managing Successful Programmes MSP, London. The Stationary Office.

OGC (2007b). STDK Home, Delivery Lifecycle: Benefits Management. Retrieved from: http://www.ogc.gov.uk/sdtoolkit/reference/deliverylifecycle/benefits_mgmt.html#benmanagement1.

Ohene-Addae, A. A. (2013). *An Assessment of Benefits Management Practices of Public Procurement Entities in the Procurement of Infrastructural Projects in Ghana: Case Study of Kumasi Metropolitan Assembly (KMA)* (Doctoral dissertation, School of Graduate Studies, Kwame Nkrumah University of Science and Technology, Kumasi).

Onyango, D. (1993). Reduction in conflicts in construction. MSc Report, Loughborough University of Technology, UK Cited in Bordoli, DW and Baldwin, AN (1998). A methodology for assessing construction project delays. *Construction Management and Economics*, *16*, 327-337.

Othman, R., & Mohyin, N. A. (2012). Managing commitment in small construction professional services firms. *Journal of Architecture, Planning and Construction Management*, *2*(1).

Otley, D. (1999). Performance management: a framework for management control systems research. *Management accounting research*, *10*(4), 363-382.

Ozcelik, G., & Ferman, M. (2006). Competency Approach to Human Resources Management:Outcomes and Contributions in a Turkish Cultural Context. *Human Resource Development Review*, *5*(1), 72-91.

Ozorhon, B., Arditi, D., Dikmen, I., & Birgonul, M. T. (2010). Performance of international joint ventures in construction. *Journal of Management in Engineering*, *26*(4), 209-222.

Palaneeswaran, E. & Kumaraswamy, K. (2000). Contractor Selection for Design-Build Projects. *Journal of Construction Engineering and Management,* 126(5), 331-39.

Pallant, J. (2010). *SPSS survival manual: A step by step guide to data analysis using SPSS*: Open University Press.

Parfitt, M.K. & Sanvindo, V.E. (1993).Checklist of Critical Success Factors for Building Projects. *Journal of Management in Engineering*, 9(3), 243-249.

Paris, C. R., Salas, E., & Cannon-Bowers, J. A. (2000). Teamwork in multi-person systems: a review and analysis. *Ergonomics*, *43*(8), 1052-1075.

Park, S. H. (2009). Whole life performance assessment: critical success factors. *Journal of Construction Engineering and Management, 135*, 1146.

Parker, D., & Hartley, K. (2003). Transaction costs, relational contracting and public private partnerships: a case study of UK defense. *Journal of Purchasing and Supply Management, 9*(3), 97-108.

Patterson, M. G., West, M. A., Lawthom, R., and Nickell, S. (1997). *Impact of People Management Practices on Business Performance*. London: Institute of Personnel and Development (IPD).

Pauline, T. P. L. (2014). *The effect of procurement on competition and flexibility: determining the suitability of public-private partnerships in major infrastructure projects*. (Doctoral thesis, Queensland University of Technology, Australia).

Payne, M. (2007). *Benefits Management: Releasing project value into the business*. Hampshire, UK, Project Manager Today.

Pellegrinelli, S., Partington, D., Hemingway, C., Mohdzain, Z., & Shah, M. (2007). The importance of context in programme management: An empirical review of programme practices. *International Journal of Project Management*, *25*(1), 41-55.

Phillips, J. J. (2003). *Return on investment in training and performance improvement programs*. Routledge.

Phua, F. T. T., & Rowlinson, S. (2003). Cultural differences as an explanatory variable for adversarial attitudes in the construction industry: The case of Hong Kong. *Construction Management and Economics, 21*(7), 777-785.

Pinto, J. K. & Slevin, D. P. (1998). Critical Success factors Across the Project Lift Cycle. *Project Management Journal*, 19(3). 67-75

Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: a critical review of the literature and recommended remedies. *Journal of Applied Psychology, 88*(5), 879.

Porter, L. W., Steers, R. M., Mowday, R. T. & Boulian, P. V. (1974). Organizational commitment, job satisfaction and turnover among psychiatric technicians. *Journal of Applied Psychology*, 59, 603 – 609.

Potgieter, T.E. & Van der Merwe, R.P. (2002). Assessment in the workplace: A competency-based approach. *SA Journal of Industrial Psychology*, 28(1), 60-66.

Qiao, J. X., & Wang, W. (2009). Managerial competencies for middle managers: some empirical findings from China. *Journal of European Industrial Training, 33*(1), 69-80.

Rajeh, A. J. M. (2014). *Comparative Analysis of Construction Procurement Systems Based on Transaction Costs*. (Doctoral thesis, Auckland University of Technology, Australia).

Rajeh, M., Tookey, J., & Rotimi, J. (2013). *Best procurement selection: development of a conceptual model based on transaction costs*. Retrieved from http://aut.researchgateway.ac.nz/handle/10292/6031

Randall, D. M. (1990). The consequences of organizational commitment: Methodological investigation. *Journal of Organizational Behavior, 11*(5), 361-378.

Ratnasabathy, S. & Rameezdeen, R. (2007). A Decision Support System for the Selection of Best Procurement System in Construction. *Built Environment,* 7(2), 151-160.

Reichers, A. E. (1985). A review and reconceptualization of organizational commitment. *Academy of Management Review,* 10, 465 – 476.

Reiss, G. A. (2000). A paper for congress. Accessed from [www.e-programme.com/uploads/articles/

Reiss, G., Anthony, M., Chapman, J., Leigh, G., Pyne, A. & Rayner, P. (2006). *Gower Handbook of programme management*. Gower Publishing, Ltd.

Remenyi, D. & Sherwood-Smith, M. (1998). Business benefits from information systems through an active benefits realization programme. *International Journal of Project Management, 16*(2), 81-98.

Reve, T., & Levitt, R. E. (1984). Organization and governance in construction. *International Journal of Project Management, 2*(1), 17-25.

Rhoades, L., Eisenberger, R., & Armeli, S. (2001). Affective commitment to the organization: the contribution of perceived organizational support. *Journal of applied psychology, 86*(5), 825.

Richardson, H., Simmering, M., & Sturman, M. (2009). A tale of three perspectives: examining post hoc statistical techniques for detection and correction of common method variance. *Organ. Res. Methods, 12*, 762.

Robinson, M. A., Sparrow, P. R., Clegg, C. & Kamal Birdi, K. (2007). Forecasting future competency requirements: a three-phase methodology. *Personnel Review*, 36(1), 65-90.

Robson, C. (2002). *Real World Research.*2nd Edition. Oxford: Blackwell Publishing.

Rodriguez, D., Patel, R., Bright, A., Gregory, D. & Gowing, M. K. (2002). Developing competency model to promote integrated human resource practices, *Human Resource Management*, 41, 309 – 324.

Rooke, J. A., Sapountzis, S., Koskela, L. J., Codinhoto, R., & Kagioglou, M. (2010). Lean knowledge management: the problem of value. In: *Proceedings of the 18th Annual Conference of the International Group for Lean Construction* (pp. 12-21).Technion-Israel Institute of Technology Printing Services.

Rothwell, W. J. & Lindholm, J. E. (1999).Competency identification, modeling and assessment in the USA. *International Journal of Training and Development*, 3(2), 90-105.

Rowe, C. (1995). Clarifying the use of competence and competency models in recruitment, assessment and staff development. *Industrial and Commercial Training*, 27(11), 12-17.

Rowley, J. (2004). Researching people and organizations. *Library Management, 25*(4/5), 208-214.

Rowlinson, S. (2001). Matrix organizational structure, culture and commitment: A Hong Kong public sector case study of change. *Construction Management and Economics, 19*(7), 669- 673.

Ruester, S. (2010). Recent Developments in Transaction Cost Economics. *SSRN eLibrary.*

Ryan, G., Emmerling, R. J., & Spencer, L. M. (2009). Distinguishing high-performing European executives. *Journal of Management Development, 28*(9), 859-875.

Saal, F. E. & Knight, P. A. (1987). *Industrial/Organizational psychology: Science and practice*. Pacific Grove: Brookes Cole.

Said, I., Omran, A., & Shafiei, M. W. M. (2009). Job competencies for the Malaysian consultant project managers. *Economic, Social, political and Cultural Problems of the Future Society*, (10), 112–121.

Sakar, P. & Widestadh, C. (2005).Benefits management-How to realize the benefits of IS/IT investments. Department of Informatics. Goteborg, University of Goteborg.

Sambasivan, M., & Soon, Y. W. (2007). Causes and effects of delays in Malaysian construction industry. *International Journal of project management*, *25*(5), 517-526.

Sapountzis, S. (2013). *An investigation into the development of an effective benefits realization process for healthcare infrastructure projects*. (Doctoral thesis, University of Salford, Manchester, UK).

Sapountzis, S., Harris, K., & Kagioglou, M. (2008). The development of a benefits realisation management process to drive successful programmes and projects. In: *Project Management Advances, Training & Certification in the Mediterranean*, 29-31 May 2008, Chios Island, Greece.

Sapountzis, S., Lima, J., Yates, K., & Kagioglou, M. (2009a). *Benefits realization for healthcare*. Retrieved from http://usir.salford.ac.uk/18408/

Sapountzis, S., Yates, K., Kagioglou, M., & Aouad, G. (2009b). *Realizing benefits in primary healthcare infrastructures*. Retrieved from: http://doi.org/10.1108/02632770910933116

Sarmawa, I., Suryani, N., & Riana, I. G. (2015). Commitment and competency as an organizational citizenship behavior predictor and its effect on the performance. *International Journal of Economics, Commerce and Management, 3*(1), 1-13.

Sarstedt, M., Hair, J. F., Ringle, C. M., Thiele, K. O., & Gudergan, S. P. (2016). Estimation issues with PLS and CBSEM: Where the bias lies! *Journal of Business Research, 69*(10), 3998-4010.

Saunders, E. (2002). *Assessing Human Competence: Practical guideline for the South African manager*. Randburg: Knowres Publishing.

Saunders, M., Lewis, P. & Thornhill A. (2007).*Research Methods for Business Students*.4th Edition. London: Prentice Hall.

Saunders, M., Lewis, P. & Thornhill A. (2012).*Research Methods for Business Students*.6th Edition. London: Prentice Hall.

Saunders, M., Lewis, P. & Thornhill A. (2015).*Research Methods for Business Students*. 7th Edition. London: Prentice Hall.

Savage, G. T., Nix, T. W., Whitehead, C. J. &, Blair, J. D. (1991). Strategies for assessing and managing organizational stakeholders. *Academy of Management Executive, 5*(2), 61-75.

Savory, C. (2006). Translating knowledge to build technological competence. *Management Decision, 44*(8), 1052-1076.

Sekaran, U. (2006). *Research methods for business: A skill building approach*. John Wiley & Sons.

Sekaran, U., & Bougie, R. (2010). *Research Methods for Business: A Skill Building Approach* (5th ed.): John Wiley & Sons.

Seng, N. W. & Yusof, A. M. (2006).The Success Factors of Design and Build Procurement Method. In: *Proceedings of the 6th Asia-Pacific Structural Engineering and Construction Conference* (APSEC 2006), Kuala Lumpur, Malaysia.

Serra, C. E. M., & Kunc, M. (2015). Benefits realization management and its influence on project success and on the execution of business strategies. *International Journal of Project Management, 33*(1), 53-66.

Sethi, R., & Nicholson, C. Y. (2001). Structural and contextual correlates of charged behavior in product development teams. *Journal of Product Innovation Management, 18*(3), 154-168.

Sharabati, M. N. (2014). *The impact of e-procurement system qualities and trust on end-user satisfaction,* (Doctoral dissertation, University Malaya).

Sheldon, M. E. (1971). Investment and involvement as mechanisms producing commitment to the organization. *Administrative Science Quarterly*, *16*, 143 –150.

Shen, L. Y., Wu, G. W., & Ng, C. S. (2001). Risk assessment for construction joint ventures in China. *Journal of Construction Engineering and Management*, *127*(1), 76-81.

Shenhar, A. J., Levy, O., & Dvir, D. (1997). Mapping the dimensions of project success. *Project Management Journal*, *28*(2), 5-13.

Shurbagi, A. M. A., & Zahari, I. B. (2014). The mediating effect of organizational commitment on the relationship between job satisfaction and organizational culture. *International Journal of Business Administration*, *5*(6), 24.

Silvius, A., & Schipper, R. (2012). Sustainability in project management competences. *Social and Behavioral Sciences*.

Silvius, G., & Schipper, R. P. J. (2014). Sustainability in project management competencies: Analyzing the competence gap of project managers. *Journal of Human Resource and Sustainability Studies*, *2*, 40-58.

Simon, H. A. (1991). Organizations and Markets. *The Journal of Economic Perspectives*, *5*(2), 25-44.

Singh, R., Chen, F., & Wegener, D. T. (2014). The similarity-attraction link: Sequential versus parallel multiple-mediator models involving inferred attraction, respect, and positive affect. *Basic and Applied Social Psychology*, *36*(4), 281-298.

Smeenk, S. G. A., Eisinga, R. N., Teelken, J. C., & Doorewaard, J. (2006). The effects of HRM practices and antecedents on organizational commitment among university employees. *International Journal of Human Resource Management*, *17*(12), 2035-2054.

Sobel, M. E. (1982). Asymptotic confidence intervals for indirect effects in structural equation models. *Sociological methodology*, *13*(1982), 290-312.

Solino, A. S., & Gago de Santos, P. (2010). Transaction Costs in Transport Public-Private Partnerships: Comparing Procurement Procedures. *Transport Reviews*, *30*(3), 389-406.

Soliño, A. S., and Gago de Santos, P. (2009). Transaction costs in PPP transport infrastructure projects. *Working Paper*, European Investment Bank, Kirchberg, Luxembourg.

Songer, A. & Molenaar, K. (1996). Selecting Design-Build: public and private sector owner attitudes. *Journal of Management in Engineering*, 12(6), 47-53.

Songer, A.D. & Molenaar, K.R. (1997). Project characteristics for successful public-sector Design-Build. *Journal of Construction Engineering and Management*, *123*(1), 40.

Spector, P. (2006). Method variance in organizational research: truth or urban legend? *Organ. Res. Methods*, *9*, 221.

Spicer, C. (2009). Building a competency model: Screening job candidates for desired competencies pays off in higher sales and lower turnover. *HR Magazine*, *54*(4), 34-37.

Statham, G., Robinson, I. & Hackett, M. (2007).*The Aqua Group Guide to Procurement, Tendering and Contract Administration*. Oxford: Blackwell Publishing.

Steers, R. M. (1977). Antecedents and outcomes of organizational commitment. *Administrative Science Quarterly*, *22*(1), 46-56.

Stevens, J. (2009). *Applied multivariate statistics for the social sciences*: Taylor & Francis US.

Storey, J. (1995). *Human Resource Management: A critical text*. London: Routledge.

Suikki, R., Tromstedt, R., & Haapasalo, H. (2006). Project management competence development framework in turbulent business environment. *Technovation*, *26*(5), 723-738.

Sulaiman, W. S. W., Almsafir, M. K., & Ahmad, Z. A. (2013). Job Performance: Relationship between competency and attitude towards achieving Tnb's vision. *Journal of Advanced Social Research Vol*, *3*(1), 1-11.

Suliman, A. M. & Iles, P. A. (2000).The multi-dimensional nature of organizational commitment in a non-western context. *Journal of Management Development*, 19, 224 – 248.

Swailes, S. (2002). Organizational commitment: A critique of the construct and measures. *International Journal of Management Reviews*, *4*(2), 155-178.

Tayler, C. J. (1992). Ethyl Benzene project: the client's perspective. *International Journal of Project Management*, *10*(3), 175-178.

Tenenhaus, M., Amato, S., & Esposito Vinzi, V. (2004). *A global goodness-of-fit index for PLS structural equation modelling.* Paper presented at the Proceedings of the XLII SIS scientific meeting.

Tenenhaus, M., Vinzi, V. E., Chatelin, Y. M., & Lauro, C. (2005). PLS path modeling. *Computational Statistics & Data Analysis*, *48*(1), 159-205.

Teodorescu, T. (2006). Competence versus competency: What is the difference? *Performance Improvement*, 45(10), 27-30.

Tetrick, L. E. (1995). Developing and maintaining union commitment: A theoretical framework. *Journal of Organizational Behavior*, 16, 583 – 595.

Thai-ngam, J., & Vathanophas, V. (2007). Competency requirements for effective job performance in the Thai public sector. *Contemporary Management Research*, *3*(1), 45-70.

Thiry, M. (2002).Combining value and project management into an effective programme management model. *International Journal of Project Management*, *20*(3), 221-227.

Thompson, J.E., Stuart, R. & Lindsay, P.R. (1996).The competence of top team members - a framework for successful performance. *Journal of Management Psychology*, 11(3), 48-66.

Thomson, D. S., Austin, S. A., Devine-Wright, H., & Mills, G. R. (2003).Managing value and quality in design. *Journal of Building Research & Information, 31*(5), 334-345.

Thorp, J. (1998). *The information paradox: realizing the business benefits of information technology*. Toronto, Canada, McGraw-Hill.

Thorp, J. (2003). *The information paradox: realizing the business benefits of information technology*. McGraw-Hill Ryerson.

Thyssen, M. H., Emmitt, S., Bonke, S., & Kirk-Christoffersen, A. (2010). Facilitating client value creation in the conceptual design phase of construction projects: a workshop approach. *Architectural Engineering and Design Management, 6*(1), 18-30.

Tillmann, P. A, Tzortzopoulos, P., & Formoso, C. T. (2010a). Analysing Benefits Realisation From a Theoretical Perspective and Its Contribution To Value Generation. In: *Proceedings of International Group for Lean Construction (IGLC-18)*, Technion, Haifa, Israel.

Tillmann, P. A., Tzortzopoulos, P., & Formoso, C. T. (2010b). Exploring the Potential Contributions of Benefits Realization to the Management of Complex Construction Projects. In: *TG65 & W065-Special Track 18th CIB World Building Congress*, Salford, United Kingdom, 479-491.

Tillmann, P., Tzortzopolous, P., Sapountzis, S., Formoso, C., & Kagioglou, M. (2012). A case study on benefits realization and its contributions for achieving project outcomes. *Proceedings of the 20th International Group for Lean Construction (IGLC)*.

Townley, B. (2002). The role of competing rationalities in institutional change. *Academy of Management Journal*, *45*(1), 163-179.

Truax, J. (1997). Investing with benefits in mind: curing investment myopia. *The DMR White Paper*, *1*(6).

Turner, J. R., & Simister, S. J. (2001). Project contract management and a theory of organization. *International Journal of Project Management, 19*(8), 457-464.

Vakola, M., Soderquist, K. E., & Prastacos, G. P. (2007). Competency management in support of organizational change. *International Journal of Manpower, 28*(3/4), 260-275.

Vinzi, E. V., Chin, W. W., Henseler, J., & Wang, H. (2010). Handbook of partial least squares: Concepts, methods and applications. *Computational Statistics Handbook series, 2*.

Virine, L., & Trumper, M. (2008). Project decisions: the art and science. Tysons Corner: *Management Concepts*.

Walker, A., & Wing, C. K. (1999). The relationship between construction project management theory and transaction cost economics. *Engineering Construction and Architectural Management*, *6*(2), 166-176.

Walton, R. (1991). From Control to Commitment in the Workplace, in Steers and Porter (eds) *Motivation and work behavior*, New York: McGraw-Hill.

Walton, R. E. (1985). *Human resource management trends and challenges*. Boston: Harvard Business School.

Wang, X., & Armstrong, A. (2004). An empirical study of PM professional's commitment to their profession and employing organizations. *International Journal of Project Management, 22*(5), 377-386.

Ward, J., & Daniel, E. (2006). *Benefits management: Delivering value from IS & IT investments*. Chichester: John Wiley & Sons.

Ward, J., & Elvin, R. (1999).A new framework for managing IT-enabled business change. *Information systems journal*, *9*(3), 197-221.

Ward, J., Taylor, P., & Bond, P. (1995). Identification, realization and measurement of IS/IT benefits: an empirical study of current practice. Brown, A. & Remenyi, D (eds) second *European Conference of Information Technology Investment Evaluation.* Henley Management College, Henley on Thames

Ward, J., Taylor, P., & Bond, P. (1996). Evaluation and realization of IS/IT benefits: an empirical study of current practice. *European Journal of Information Systems*, *4*(4), 214-225.

Warszawski, A. (1996). Strategic planning in construction companies. *Journal of construction engineering and management*, *122*(2), 133-140.

Welch, W. W., & Barlau, A. B. (2013). Addressing Survey Nonresponse Issues: implications for ATE principal investigators, evaluators, and researchers.

Wenan, Y., & Mengjun, W. (2010). A Study on Constructing Index Systems of Construction Market Performance Appraisal. 361-364.

Whittington, J. (2008). *The transaction cost economics of highway project delivery: Design-Build contracting in three states*. University of California, Berkeley, CA.

Wiener, Y. & Vardi, Y. (1980). Relationships between job, organization and work outcomes: An integrative approach. *Organizational Behavior and Human Performance*, 26, 81 – 96.

Wiinberg, A. (2010). *Benefit Realization from Lean*. (Master's thesis, Luleå University of Technology, Sweden).

Williams, L. J., & Brown, B. K. (1994). Method variance in organizational behavior and human resources research: Effects on correlations, path coefficients, and hypothesis testing. *Organizational Behavior and Human Decision Processes, 57*(2), 185-209.

Williams, M. L. & Anderson, S. E. (1991).Job satisfaction and organizational commitment as predictors of organizational citizenship and in-role behaviors. *Journal of Management,* 17, 601 – 617.

Williamson, O. E. (1975). *Markets and hierarchies, analysis and antitrust implications: A study in the economics of internal organization*. New York: Free Press.

Williamson, O. E. (1981). The Economics of Organization: The Transaction Cost Approach. *American Journal of Sociology, 87*(3), 548-577.

Williamson, O. E. (1985a). Assessing Contract. *Journal of Law, Economics, & Organization, 1*(1), 177-208.

Williamson, O. E. (1985b). *The economic institutions of capitalism: Firms, markets, relational contracting*. New York, London: Free Press, Collier Macmillan.

Williamson, O. E. (2005a). Transaction cost economics and business administration. *Scandinavian Journal of Management, 21*(1), 19-40.

Williamson, O. E. (2005b). The economics of governance. *American Economic Review, 9*5(2), 1-18.

Williamson, O. E. (2008). Outsourcing: transaction cost economics and supply chain management. *Journal of Supply Chain Management, 44*(2), 5(12).

Williamson, O. E. (2010a). Transaction Cost Economics: The Natural Progression. *American Economic Review, 100*(3), 673-690.

Williamson, O. E. (2010b). Transaction Cost Economics: The Origins. *Journal of Retailing, 86*(3), 227-231.

Williamson, O. E., Wachter, M. L., & Harris, J. E. (1975). Understanding the employment relation: The analysis of idiosyncratic exchange. *The Bell Journal of Economics*, 250-278

Winch, G. M. (1989). The construction firm and the construction project: a transaction cost approach. *Construction Management and Economics, 7*(4), 331-345.

Winch, G. M. (2001). Governing the project process: a conceptual framework. *Construction Management and Economics, 19*(8), 799-808.

Winter, M., Smith, C., Morris, P., & Cicmil, S. (2006). Directions for future research in project management: The main findings of a UK government-funded research network. *International journal of project management*, *24*(8), 638-649.

Winterton, J., Parker, M., McCracken, M., Dodds, M. & Henderson, I. (2000).*Future Skill Needs of Managers*, Research Report RR182, Sheffield: Department for Education and Employment.

Wirawan, (2012). Evaluasi Kinerja Sumber Daya Manusia, Teori, Aplikasi, dan Penelitian, Jakarta: Salemba Empat.

Wold, H. (1985). Partial least squares. *Encyclopedia of statistical sciences*.

Wright, J. N., & Race, P. (2004). *The Management of Service Operations* (Second Edition ed.). London: Thomson.

Wysocki, R. K., & Lewis, J. P. (2001). *World Class Project Manager: A Professional Development Guide*. Basic Books.

Xia, B. & Chan, A.P.C. (2010).Key Competences of Design and Build. *Journal of Facilities Management*, *8*(2), 114-29.

Xiao, H. (2002). The Performance of Contractors in Japan, the US and the UK, an evaluation of construction Quality. *International Journal of Quality & Reliability Management*, *19*(6), 672-87.

Yamin, H.M., & Maisah, M. (2010). *Standarisasi Kinerja Guru*, Jakarta: Gaung Persada press.

Yaşar, M. F., Ünal, Ö. F., & Zaim, H. (2013). Analyzing the Effects of Individual Competencies on Performance: a Field Study in Services Industries in Turkey. *Journal of Global Strategic Management*, *2*(7), 67–67.

Yates, D. J. (1999). Conflict and dispute in the development process: A transaction cost economic perspective. *Working Paper*, Department of Real Estate and Construction, University of Hong Kong, Hong Kong, China.

Yeh, H., & Hong, D. (2012). The mediating effect of organizational commitment on leadership type and job performance. *The Journal of Human Resource and Adult Learning*, *8*(2), 50.

Yin, R. K. (2003). *Applications of Case Study Research*: Sage Publications.

Zwikael, O. & Smyrk, J. (2011). *Project management for the creation of organizational value*. Springer Science & Business Media.